

REMARKS

By the present amendment, claims 18, 26, 41 and 49 have been amended. Claims 55 and 56 have been added.

Claims 18-33 and 41-56 are now pending in the application. Claims 1-17 and 34-40 were previously canceled. Reconsideration and allowance of all of the claims is respectfully requested in view of the following remarks.

In regard to Rejection of claims 18, 19 and 22-29 Under 35 USC § 102(b)

The Examiner has rejected claims 18, 19 and 22-29 under 35 U.S.C. § 102(b), as being anticipated by Herrera, U.S. Patent No. 6,358,106. The Applicants believe this rejection has been addressed and overcome by the present amendment.

By the present amendment, the Applicants have amended claim 18 to recite:

a rigid midsection having at least one midsection cover;
[...]
a first volume defined between the midsection and the
midsection cover;

Bearing this in mind, the Examiner's attention is directed to the following feature of claim 18:

a first silencer filling a majority of the first volume;

The Applicants submit that at least the above feature of claim 18 as amended is not taught by Herrera.

The Examiner has stated on page 4 of the rejection dated June 15, 2007 that

a "midsection" can broadly be interpreted as a space that is enclosed by the exposed surface of film 52 that faces away from the cover 46 (see fig. 6). In other words, the exposed surface of the film 52 defines an outer periphery, or contour, of the "midsection".

The Examiner has further stated in paragraph 2 of the most recent rejection that

[b]ecause the exhaust housing assembly of Herrera supports the powerhead, and a portion of the lower motor cover confronts a portion of the exhaust housing assembly, such space is considered as a midsection that supports the engine.

The Applicants understand the Examiner's statements to mean that the space bounded by the inner surface of the film 52 is considered as a midsection that supports the engine.

In view of the present amendment, the Applicants submit that the space bounded by the inner surface of the film 52 of Herrera cannot be considered a rigid midsection as claimed.

Referring to lines 44-48 of column 4 of Herrera,

In the case of the lower motor cover, [...] the film facing had a thickness of 0.005 inch.

Referring also to Figures 2, 5 and 6 of Herrera, it is apparent that the film facing 52 of Herrera is part of the vibro-acoustic treatment 38 applied to the port and starboard lower motor cover parts 22, 24. In particular, the film facing 52 is a flexible layer of polyether-based polyurethane having a thickness of 0.005 inch. As such, the film facing 52 of Herrera is incapable of supporting the powerhead 8, and cannot be considered a rigid midsection as claimed. The space enclosed by the exposed surface of the film facing 52 is still less capable of supporting the powerhead because it is merely a space and has no internal structure capable of supporting a weight. Therefore, the space cannot be considered a rigid midsection.

It is apparent that the powerhead 8 of Herrera is supported on the exhaust housing assembly 26. Referring to Figure 5 of Herrera, it is apparent that the vibro-acoustic treatment 38 of Herrera is a sheet of uniform thickness applied to the inner surfaces of the port and starboard lower motor covers 22, 24 of Herrera. The vibro-acoustic treatment 38 of Herrera forms a layer that adheres to the inner surface of the respective motor cover, and as such follows the shape of the port and starboard lower motor covers of Herrera. Referring to Figures 1, 2 and 4 of Herrera, it is apparent that the port and starboard lower motor covers 22, 24 of Herrera curve away from the exhaust housing assembly 26. Therefore, the vibro-

acoustic treatment 38 of Herrera is spaced apart from the exhaust housing assembly 26 and does not fill “a majority of the first volume” as claimed, i.e. a majority of the volume defined by the midsection and the midsection cover.

Therefore, at least one feature of claim 18 as amended is not taught by Herrera. As such, the Examiner is requested to withdraw his rejection of claim 18 and claims 19 and 22-29 depending therefrom.

In regard to Rejection of claims 41-47, 49-51 and 53 Under 35 USC § 103(a)

The Examiner has rejected claims 41-47, 49-51 and 53 under 35 U.S.C. § 103(a), as being unpatentable over Herrera. The Applicants believe this rejection has been addressed and overcome by the present amendment.

Claim 41 as amended recites:

an engine supported on the midsection;
[...]
a cover disposed about the engine and enclosing a volume
therebetween, an inner surface of the cover and an outer surface
of the engine together defining a shape of the volume

Bearing this in mind, the Examiner’s attention is directed to the following feature of claim 41 as amended:

a vibro-acoustic treatment disposed within the volume and
shaped to substantially match the shape of the volume

Claim 49 as amended recites:

an engine supported on the midsection;
[...]
an inner contour of the lower motor cover and an outer contour
of the midsection together defining a shape of the volume;

Bearing this in mind, the Examiner’s attention is directed to the following feature of claim 49 as amended:

a shaped lower silencer having a shape that substantially matches the shape of the volume,

The Examiner has stated in paragraph 4 of the rejection that

Herrera does not expressly disclose or show the positioning of the silencers relative to the respective outlines of the engine or the midsection. Therefore, it is not clear if the inner contours of the vibro-acoustic silencers are shaped to substantially match the inner contours of the first and second volumes, respectively.

The Applicants disagree with the Examiner's assertion.

Referring to lines 17-23 of column 4 of Herrera,

The structure of the vibro-acoustic composite material in accordance with the preferred embodiment of the invention is depicted in FIG. 6. The composite material comprises a sheet of moldable acoustic barrier-like material 44 adhered to an inner surface of a motor cover or motor cover part 46 by means of a layer of visco-elastic pressure-sensitive adhesive material 48.

Referring also to lines 44-53 of column 4 of Herrera,

In the case of the lower motor cover, the sheet of ethylene vinyl acetate had a density of 2 lb./ft² ; the acrylic adhesive layer 48 had a thickness of 4 mils; the open-cell polyurethane foam core had a thickness of 0.5 inch; and the film facing had a thickness of 0.005 inch. In the case of the upper motor cover, the sheet of ethylene vinyl acetate had a density of 1 lb./ft² ; the acrylic adhesive layer 48 had a thickness of 4 mils; the open-cell polyurethane foam core had a thickness of 0.25 inch; and the film facing had a thickness of 0.005 inch.

Referring also to Figure 6 of Herrera, it is apparent that the vibro-acoustic treatment 38 of Herrera is made up of four of layers 48, 44, 50, 52, each of which has a uniform thickness. The acrylic adhesive layer 48 has a thickness of 4 mils, the open-cell foam core layer 50 has a thickness of 0.25 or 0.5 inch and the film facing has a thickness of 0.005 inch. the acoustic barrier material 44 is described as a "sheet" of ethylene vinyl acetate with a

density per unit area of 1 lb./ft² or 2 lb./ft². This way of expressing the density of a material is suggestive of a uniform thickness.

Referring also to lines 19-23 of column 4 of Herrera,

The composite material comprises a sheet of moldable acoustic barrier-like material 44 adhered to an inner surface of a motor cover or motor cover part 46 by means of a layer of visco-elastic pressure-sensitive adhesive material 48.

It is apparent that Herrera teaches that the acoustic barrier material 44 is adhered to the inner surface of the respective motor cover by a pressure-sensitive adhesive material 48. This method of assembly would be impractical if the acoustic barrier material 44 had a non-uniform thickness, because it would be difficult to exert a consistent pressure over the entire layer of material. As such, Herrera teaches a vibro-acoustic treatment made up of layers each having a uniform thickness, and as a result the shape of the inner surface of the vibro-acoustic treatment generally follows the shape of the interior surface of the respective motor cover of Herrera.

Regarding claim 41, as the Examiner has indicated, Herrera does not show the particular outline of the powerhead 8. However, it would be apparent to a person skilled in the art that the powerhead 8 of Herrera would inherently be irregularly shaped and would not substantially match the shape of the upper motor cover 10. As such, a vibro-acoustic treatment of uniform thickness adhering to the upper motor cover 10 would not substantially match the shape of the volume between the upper motor cover 10 and the powerhead 8 of Herrera, irrespective of the particular shape of the powerhead 8, because the inner surface of the cover and the outer surface of the engine together define the shape of the volume.

Regarding claim 49, as the Examiner has indicated, Herrera does not show the entire outline of the exhaust housing assembly 26. However, referring to Figure 2 of Herrera, the visible portion of the exhaust housing assembly 26 of Herrera extends vertically and maintains a relatively constant cross section along its length. A person skilled in the art would understand that the portion of the exhaust housing assembly hidden by the lower motor cover 22 of Herrera would have the same relatively constant cross section, so as not to make the top portion of the exhaust housing assembly 26 of Herrera wider than necessary, which would

unduly increase the weight of the outboard motor of Herrera. The bottom portion of the lower motor cover 22 of Herrera curves outward, away from the exhaust housing assembly 26. As such, a vibro-acoustic treatment of uniform thickness adhering to the upper motor cover 10 would be spaced apart from the exhaust housing assembly 26 of Herrera, and would not substantially match the shape of the volume between the lower motor cover 22 and the exhaust housing assembly 26, because the inner surface of the lower motor cover 22 and the outer surface of the exhaust housing assembly 26 together define the shape of the volume.

The Examiner has also stated in paragraph 4 of the rejection that

the primary purpose of the silencers is to maximize the reduction of noise that emanates from the outboard motor. It is also noted that the degree of noise attenuation is directly proportional to the volume of the vibro-acoustic treatment provided. Therefore, it would have been obvious for one skilled in the art at the time of the invention to substantially fill the available volume with a vibro-acoustic treatment so as to maximize the noise attenuation.

Contrary to the Examiner's assertion, it would not have been obvious to substantially fill the available volume with the vibro-acoustic treatment, as doing so would alter the uniform thickness of the vibro-acoustic treatment, contrary to the specific teaching of Herrera, and would make it more difficult to adhere the vibro-acoustic treatment to the cover portions of Herrera using a pressure-sensitive adhesive.

As such, Herrera does not teach a vibro-acoustic treatment shaped to substantially match the shape of the volume as claimed, i.e. the shape of the volume defined by the cover and the engine.

Therefore, at least one feature of claims 41 and 49 is not taught by Herrera. As such, the Examiner is requested to withdraw his rejection of claim 41 and claims 42-47 depending therefrom, as well as claim 49 and claims 50, 51 and 53 depending therefrom.

In regard to Rejection of claims 20, 21, 30-33, 48, 52 and 54 Under 35 USC § 103(a)

The Examiner has rejected claims 20, 21, 30-33, 48, 52 and 54 under 35 U.S.C. § 103(a), as being unpatentable over Herrera. The Applicants believe this rejection has been addressed and overcome by the present amendment.

Claims 20, 21 and 30-33 recite additional features of the invention and are therefore believed to be allowable for the same reasons recited above with respect to claim 18 and for the additional features recited therein.

Claim 48 recites additional features of the invention and is therefore believed to be allowable for the same reasons recited above with respect to claim 41 and for the additional features recited therein.

Claims 52 and 54 recite additional features of the invention and are therefore believed to be allowable for the same reasons recited above with respect to claim 49 and for the additional features recited therein.

As such, the Examiner is requested to withdraw his rejection of claims 20, 21, 30-33, 48, 52 and 54.

Support for Amendments

By the present amendment, claim 18 has been amended to recite “a rigid midsection”. This amendment is believed to be supported by the following portion of paragraph [0029] of the application as originally filed:

Engine 12 is housed generally in a powerhead 18 and is supported on a midsection 20 configured for mounting on a transom 22 of a boat 24 in a known conventional manner.

It is submitted that a midsection capable of having a powerhead supported thereon is inherently rigid.

By the present amendment, claim 18 has been amended to recite “a first volume defined between the midsection and the midsection cover” and “a second volume defined between the engine and the engine cover”. These are believed to be merely clarifications of the previous claim wording.

By the present amendment, claim 26 has been amended to be consistent with the amendment to claim 18.

By the present amendment, claims 41 and 49 have been amended to recite various features of an outboard motor. This amendment is believed to be supported by paragraph [0029] of the application as originally filed.

By the present amendment, claim 55 has been added. This claim is believed to be supported by the application as originally filed. In particular, the feature “the first silencer being snugly positioned about the midsection, the first silencer filling a majority of the first volume” is believed to be supported by the following portion of paragraph [0047] of the application as originally filed:

Covers 52 and 54 with silencers 96 and 98 disposed therein are
[snugly] positioned about midsection 20.

By the present amendment, claim 56 has been added. This claim is believed to be supported by the application as originally filed. In particular, the feature “the midsection having an exhaust housing” is believed to be supported by the following portion of paragraph [0047] of the application as originally filed:

An exhaust passage 182 extends through midsection 20 and is
in fluid communication with idle relief muffler 168.

In view of the above remarks, the Applicants respectfully submit that all of the currently pending claims are allowable and that the entire application is in condition for allowance.

Should the Examiner believe that anything further is desirable to place the application in a better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

At the time of filing of the present response, no fees were believed to be necessary. In case any fee should be necessary, the Office is hereby authorized to debit Deposit Account number 502977.

Respectfully submitted,

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